CHAPTER 9. HELIPORT GRADIENTS AND PAVEMENT DESIGN

75. GENERAL. This chapter provides guidance on the designing heliport pavements, including design loads, and addresses soil stabilization as a method of treating non- paved operational surfaces.

76. GRADIENTS. Operational surfaces such as the FATO, TLOF, parking apron, taxi route, and taxiway should present a reasonably smooth, uniformly graded surface.

a. Soft Surfaces. The "soft" unpaved surfaces of a heliport should be graded to be free of surface irregularities and be designed to provide positive drainage. Longitudinal and transverse gradients of soft surfaces may range between a minimum of 2.0 to a maximum of 5.0 percent. A maximum gradient of 2.0 percent should be established for any soft surface on which the helicopter is expected to land.

b. Hard Surfaces. The "hard" surfaces of a heliport, whether paved or of metal or wood plank construction, should be designed to present a smooth surface and provide positive drainage. Longitudinal and transverse gradients of hard surfaces may range between a minimum of 0.5 to a maximum of 2.0 percent. Paved surfaces should be designed with a shoulder as illustrated in figure 9-1 to ensure that water is carried away from the pavement.

77. DESIGN LOADS. Heliport "hard" load bearing surfaces should be designed and constructed to support the weight of the design helicopter. Helicopter weights are listed in Appendix 1. Loads are applied through the contact area of the tires for wheel equipped helicopters or the contact area of the skid for skid equipped helicopters. Helicopter landing gear contact area configurations are illustrated in Figure 9-2.

a. Static Loadings. For design purposes, the design static load is equal to the helicopter's maximum takeoff weight applied through the total contact area of the wheels or skids.

b. Dynamic Loadings. A dynamic load of 1/5 second or less duration may occur during a hard landing. For design purposes, dynamic loadings may be assumed at 150 percent of the takeoff weight of the design helicopter. When specific loading data is not available, assume 75 percent of the weight of the design helicopter to be applied equally through the main landing gears of a wheel equipped helicopter, or through the aft contact areas (See figure 9-2) of a skid equipped helicopter.

c. Rotor Loading. Rotor (down wash) loadings are approximately equal to the weight of the helicopter distributed uniformly over the disk area of the rotor. Tests have established that rotor (down wash) loadings are generally less than the loadings specified in building codes for snow, rain, or wind loadings typically used in structural design calculations.

78. PAVEMENT DESIGN AND SOIL STABILIZATION. Pavements distribute the helicopters weight over a larger area of the subsurface as well as providing a water impervious, skid resistant wearing surface. Paving TLOFs, taxiways and parking aprons is encouraged to improve their load carrying ability, to minimize the erosive effects of rotor wash, and to facilitate surface runoff. Stabilizing unpaved portions of the FATO and taxi routes subjected to rotor wash is also encouraged. Guidance on pavement design and on stabilizing soils is contained in AC 150/5320-6, Airport Pavement Design and Evaluation, and AC 150/5370-10, Standards for Specifying Construction of Airports.

a. Pavements. In most instances, a 6 inch (15 cm) thick Portland Cement Concrete (PCC) pavement is capable of supporting operations by helicopters weighing up to 20,000 pounds (9 216 kg). Thicker pavements are generally not required unless heavier helicopters are expected, or the quality of the subsurface soil is questionable. PCC pavement is recommended for all heliport surfaces used by skid equipped helicopters.

b. Stabilizing Soils. Different methods of soil stabilization may be used to meet different site requirements.

(1) Turf. A dense well-drained turf is the least intrusive and most cost effective way to develop a usable landing surface capable of supporting the weight of many of the helicopters used by private and corporate operators. Climatic and soil conditions dictate the appropriate grass species to use at the site to provide protection against rotor induced erosion.

(2) Aggregate-Turf. The load carrying capability of poor soils may be improved by mixing selected granular materials such as crushed stone, pit-run gravel, coarse sand, oyster shell, etc. into the upper 12 inches (30 cm) of the soil. The ratio of aggregate to

soil must be sufficient to improve the stability of the soil yet retain the soils ability to support grass.

c. Formed Masonry Shapes. Pre-cast masonry shapes vary in size and shape from a brick paver to an open block. Pavers can be laid on a prepared bed to present a solid surface. Pre-cast blocks can be embedded in the soil with grass growing in the natural openings. Architectural catalogs identify different masonry shapes that are commercially available for this purpose.

d. Pierced Metal Panels. Perforated metal panels, that allow grass to grow through the openings, can be laid on the ground to provide a hard surface for helicopter operations. Engineering catalogs identify commercially available panels.

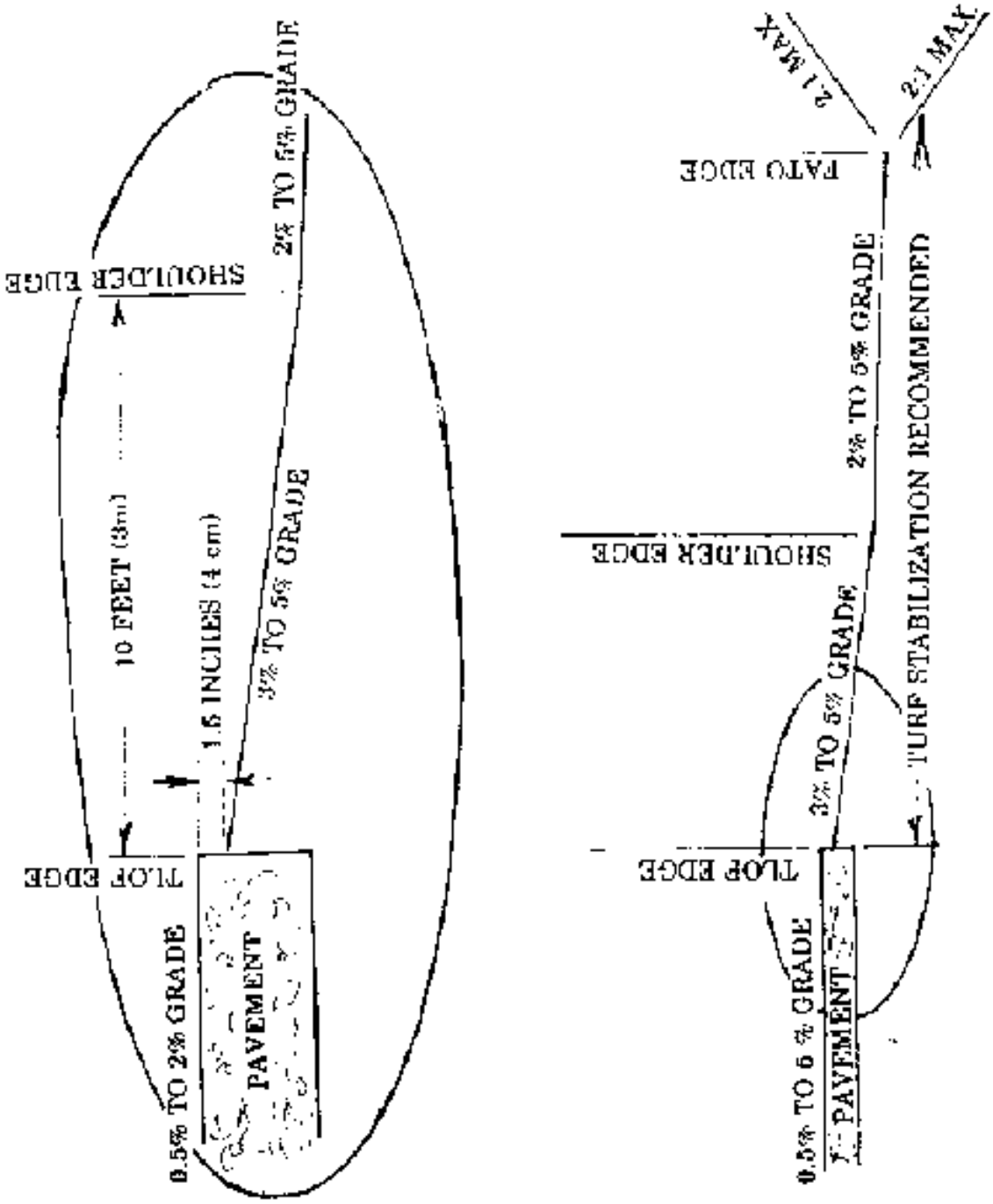
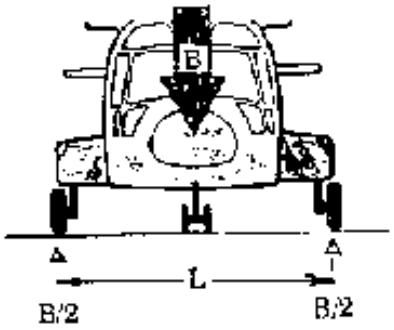
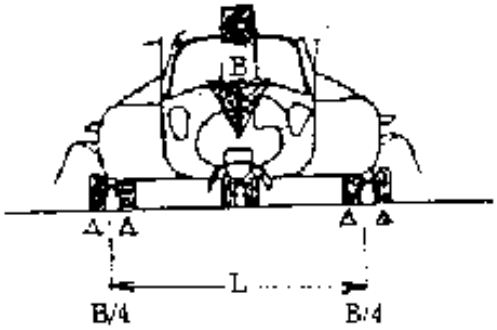


Figure 9-1. **Heliport grades and shoulder**

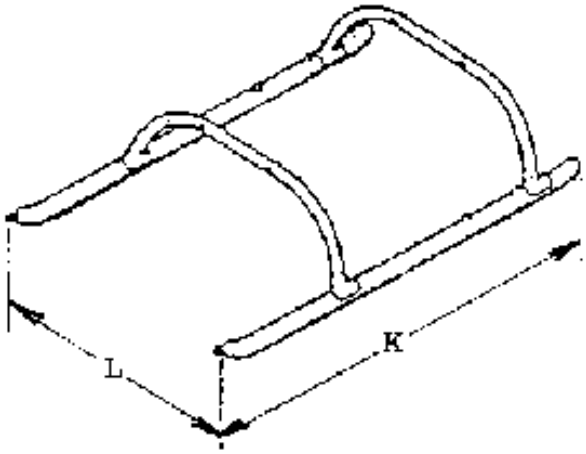


TYPICAL SINGLE WHEEL CONFIGURATION



TYPICAL DUAL WHEEL CONFIGURATION

B = GROSS WEIGHT
B/2 = GROSS WEIGHT/GEAR/SKID
B/4 = GROSS WEIGHT/TIRE
K = WHEEL BASE/SKID LENGTH
L = TREAD



TYPICAL SKID CONFIGURATION

Figure 9-2. Helicopter landing gear loading

APPENDIX 1. HELICOPTER DATA

This appendix contains selected helicopter data needed by a heliport designer. The data represent the most critical weight, dimensional, or other data entry for that helicopter model recognizing that specific versions of the model may weigh less, be smaller in some feature, carry fewer passengers, etc.

The published information has been verified by the various helicopter manufacturers and is current as of the date of publication. If more specific data is needed the specific helicopter manufacturer should be contacted. Appendix X lists manufacturers' addresses.

A Manufacturer and helicopter model.

B Maximum takeoff weight in pounds.

C Overall length in feet. (Rotors at their maximum extension.)

D Overall height in feet. (Usually at tail rotor.)

E Rotor diameter in feet/no. of blades

F Rotor plane clearance in feet.

G Distance rotor hub to tail in feet.

H Tail rotor diameter (in feet). No Blades.

I Tail rotor ground clearance in feet.

J Gear pattern.

K Undercarriage length in feet. (Strut to strut.)

L Undercarriage width in feet. (The distance between tire or skid centers.)

M Number and type of engines.

N Number of crew and passengers.

O Standard fuel capacity in gallons.

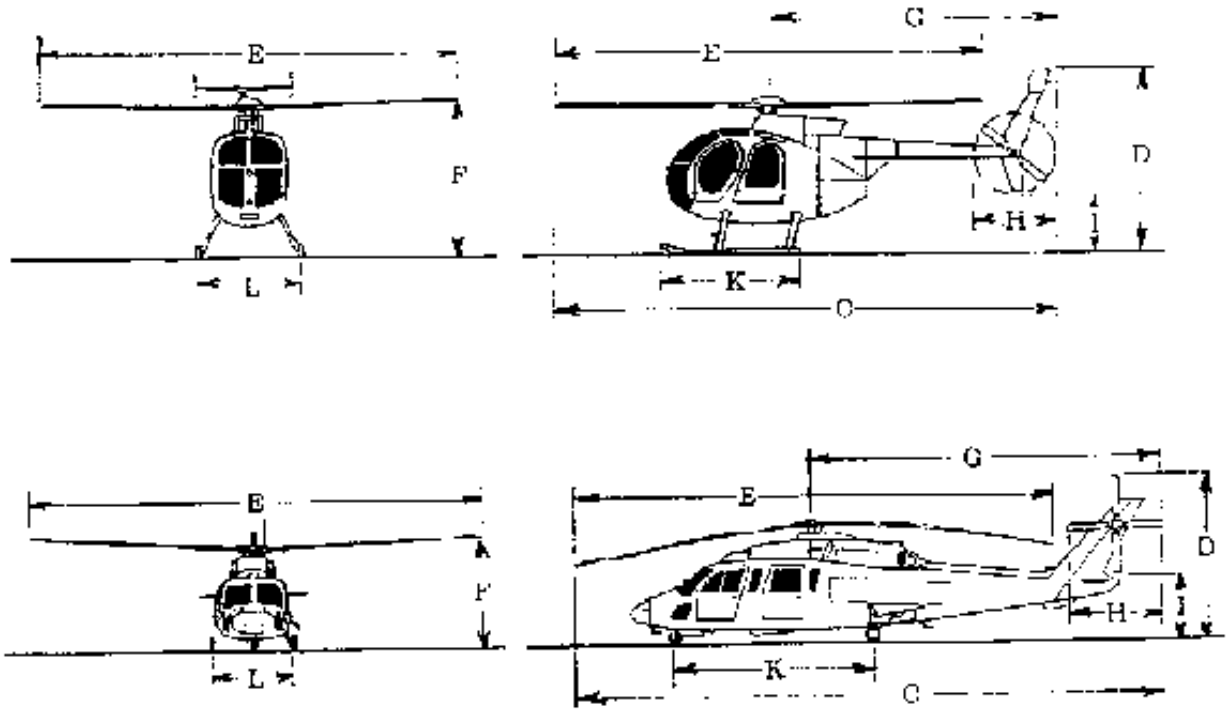


Figure A1-1. Helicopter dimensions

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1		Maximum			Main Rotor			Tail Rotor					Number		
2	Manufacturer	Takeoff	Overall		Diameter	Ground	Hub to	Diameter	Ground	Undercarriage			Engines	Crew	Standard
3	Model	Weight	Length	Height	No. Blades	Clearance	Aft End	No. Blades	Clearance	Type	Length	Width	Type	Passengers	Fuel
4		(Pounds)	(Feet)	(Feet)	(Feet/No.)	(Feet)	(Feet)	(Feet/No.)	(Feet)		(Feet)	(Feet)		No.&No.	(Gallons)
5															
6	AMERICAN EUROCOPTER														
7	315 Lama	4,300	43	11	37/3	10.1	24	6.3/3	3.2	skid	5.3	7.8	1-T	1&4	152
8	330 Puma	16,315	60	17	50/4	14.4	45	10.0/5	6.9	[illegible]	13.3	9.4	2-T	2&21	408
9	332 Super Puma	18,960	62	17	52/4	15	46	10.0/5	6.1	[illegible]	17.3	9.8	2-T	2&23	535
10	341 Gazelle	3,970	40	11	35/3	8.9	23	Fenestron	2.3	skid	6.4	6.6	1-T	1&4	120
11	350 A Star/Ecureuil	4,960	43	11	35/3	10.5	25	6.1/2	2.3	skid	4.7	7.1	1-T	1&6	143
12	355 Twin Star	5,600	43	11	35/3	10.7	25	6.1/2	2.3	skid	4.9	7.1	2-T	1&6	193
13	360 Dauphin	6,615	44	12	38/4	11.5	25	Fenestron	na	[illegible]	23.7	6.4	1-T	1&13	169
14	365 Dauphin 2	9,369	45	14	40/4	11.4	24	Fenestron	2.6	[illegible]	11.9	6.7	2-T	1&13	302
15	BO-105	5,732	39	10	33/4	9.8	23	6.2/2	6.1	skid	8.3	8.3	2-T	1&5	151
16	BK 117	7,385	43	13	37/4	11	25	6.4/2	6.3	skid	6.2	8.2	2-T	1&10	184
17															
18	AUGUSTA														
19	A 109	5,997	43	11	37/4	10	25	6.7/2	2.3	[illegible]	11.6	7.5	2-T	1&7	185
20															
21	BELL HELICOPTER														
22	47	2,950	44	10	36/2	9.5	25	5.1/2	3.5	skid	5.1	7.5	1-P	1&3	58
23	205	9,500	58	15	48/2	11.8	31	8.5/2	5.9	skid	12.1	8.6	1-T	1&14	215
24	206 Jet/Long Ranger	4,450	43	10	37/2	9.5	25	5.4/2	1.5	skid	9.9	7.2	1-T	1&6	110
25	212	11,200	58	13	49/2	13.4	34	8.5/2	4.3	skid	12.1	8.7	2-T	1&14	215
26	214	17,500	63	16	52/2	14	37	9.7/2	3.5	skid	12.1	8.6	2-T	2&16	435
27	230	8,400	51	12	42/2	12	30	6.9/2			12.2	9.1	2-T	1&9	247
28	412	11,900	57	15	46/4	11	34	8.5/2	2.3	skid	7.9	8.3	2-T	1&11	330
29															
30	BRANTLY/HAYNES														
31	B-2-B	1,670	28	7	24/3	8	16	4.3/2	3	skid		6.5	1-P	1&1	31
32	Model 305	2,900	33	8	29/3	8	19	4.3/2	3		6.2	6.8	1-P	1&4	43
33															
34	BOEING														
35	107	20,000	84	17	50/3	15	59	50/3	16.9	[illegible]	24.9	12.9	2-T	3&25	350
36	234	48,500	99	19	60/4	15	69	60/4	18.7	[illegible]	25.8	10.5	2-T	3&44	2,100
37	360	36,160	84	20	50/4	14	59	50/4	19.6	[illegible]	32.7	13	2-T	3&30	834
38															
39	E.H. INDUSTRIES														
40	EH-101	31,500	75	22	61/5	21.3	45	13.1/4	8.2	[illegible]	22.9	14.9	3-T	3&30	1015

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1		Maximum			Main Rotor			Tail Rotor					Number		
2	Manufacturer	Takeoff	Over all		Diameter	Ground	Hub to	Diameter	Ground	Undercarriage			Engines	Crew	Standard
3	Model	Weight	Length	Height	No. Blades	Clearance	Aft End	No. Blades	Clearance	Type	Length	Width	Type	Passengers	Fuel
4		(Pounds)	(Feet)	(Feet)	(Feet/No.)	(Feet)	(Feet)	(Feet/No.)	(Feet)		(Feet)	(Feet)		No.&No.	(Gallons)
5															
6	ENSTROM														
7	280F/28F	2,600	37	9	32/3	9.1	21	4.7/2	3.1	skid	3.1	7.3	1-P	1&2	40
8	480	2,650	37	10	32/3	9.1	21	5.0/2		skid		6.1	1-T	1&3	90
9															
10	KAMAN														
11	K-MAX	6,000	51	21	2 48/2	10.7	28	NA	NA	[illegible]	15.3	11.3	1-T	1	230
12															
13	McDONNELL-DOUGLAS														
14	500/520/550	3,100	32	9	28/5	8.5	19	4.6/2		skid	4.5	6.3	1-T	1&4	65
15	520N/530N	3,350	32	9	27/5	8.7	17	NOTAR		skid	4.5	6.5	1-T	1&4	65
16	MDX Explorer	5,800	39	12	34/5		23	NOTAR	3.3	skid	7.3	7.3	2-T	1&7	150
17															
18	PIASECKI														
19	PZL Sokol	14,080	61.7	13.8	51.5/4			10.0/3		[illegible]			2-T	2&12	
20															
21	ROBINSON														
22	R-22	1,370	29	9	26/2	8.8	16	3.5/2		skid	4.2	6.3	1-P	1&1	20
23	R-44 Astro	2,400	38	11	33/2	10.5	22	4.8/2		skid	4.2	7.2	1-P	1&3	32
24															
25	ROGERSON HILLER														
26	RH-1100	3,500	42	10	36/2	9.5	24	6.0/2	5	skid	7.9	7.2	1-T	1&6	69
27	UH-12	3,100	41	11	36/2	10.1	23	6.0/2	4	skid	8.5	7.5	1-P	1&2	46
28															
29	SCHWEIZER														
30	269	1,670	29	9	26/3	5.8	15	3.8/2	3.8	skid	3.6	6.3	1-P	1&1	
31	300	2,050	31	9	27/3	8.8	18	4.3/2	2.4	skid	8.5	6.5	1-P	1&2	49
32	330	2,200	31	10	27/3	9.2	15	4.3/2	3.2	skid		6.5	1-T	1&3	60
33															
34	SIKORSKY														
35	S-58	13,000	66	16	56/4	11.4	38	9.5/4	6.4	[illegible]	28.3	17	2-T	2&10	283
36	S-61	20,500	73	19	62/5	17	42	10.6/5	8.3	[illegible]	23.5	14	2-T	3&28	654
37	S-64 Skycrane	42,000	89	26	72/6	18.6	53	16.0/4	9.4	[illegible]	24.4	19.8	2-T	3&0	1,320
38	CH-53	69,750	100	29	79/7	17	61	20.0/4	9.5	[illegible]	27.3	13	3-T	3&55	1028
39	UH-60 Blackhawk	22,000	65	18	54/4	12.3	38	11.0/4	6.5	[illegible]	29	8.9	2-T	3&11	362
40	S-76	11,700	53	15	44/4	10	31	8.0/4	6.5	[illegible]	16.4	8	2-T	2&12	282
41															
42	WESTLAND														
43	30-100-60	12,800	53	16	44/4	12.5	31	8.0/4	7.5	[illegible]	12.9	10.1	2-T	2&19	348

APPENDIX 2. MARKING DIMENSIONS

1. PUBLIC USE HELIPORT. The letter H, illustrated in figure A2-1, identifies a facility as a public use heliport. The H is centered in the TLOF or the intended landing position of an unpaved FATO and aligned with the preferred direction of approach. The recommended height of the H is the lesser of 0.8 times the TLOF length, 1.2 times the TLOF width, or 60 feet (18 m). The recommended width is 0.66 times the H's height. Width of vertical lines should be 0.07 times the H's height and width of the horizontal lines should be 0.14 times the H's height. When a black border is provided, it should be 0.02 times the H's height.

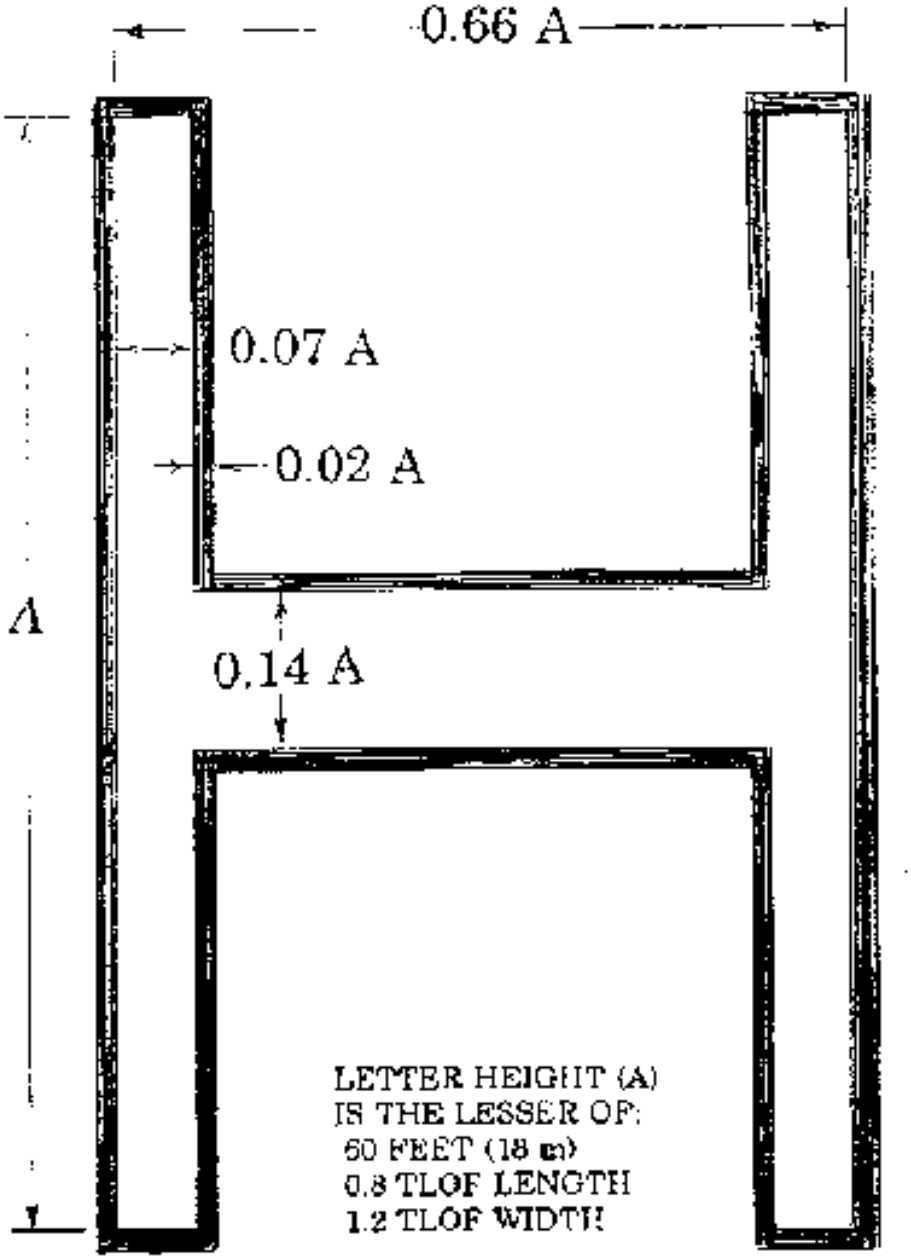


Figure A2-1. Standard heliport H marking

2. HOSPITAL HELIPORT. The cross marking identifying a hospital heliport is illustrated in figure A2-2. It is a configuration of 4 squares abutting on a center square. The recommended height and width of the cross is 0.8 times the TLOF's least dimension but not more than 30 feet (9 m). The red capital letter H, located in the center of the square, is the height of the center square with a width that is 0.66 the height of the center square. The width of vertical lines should be 0.1 times the H's height and the width of the horizontal lines should be 0.2 times the H's height. The cross may have a red border

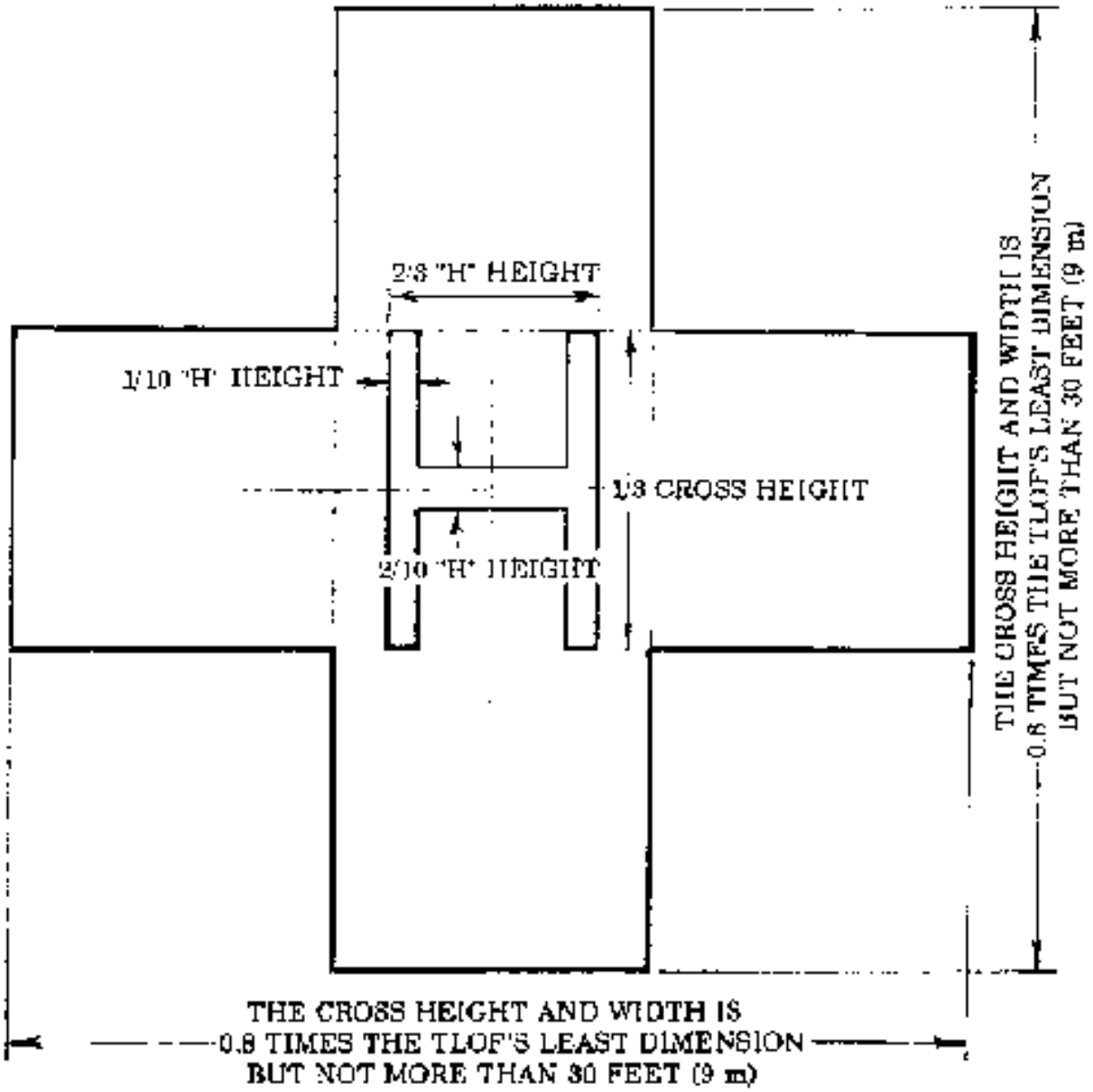
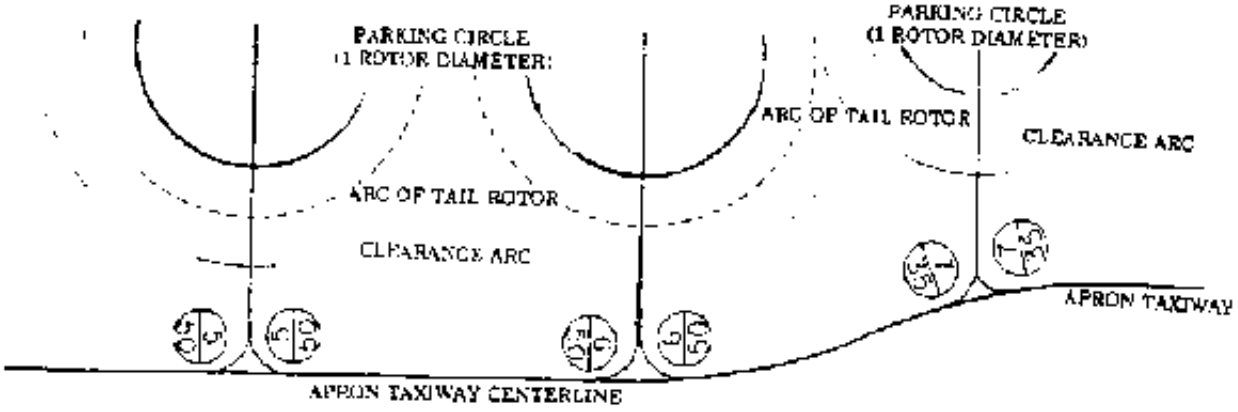


Figure A2-2. Hospital heliport marking

3. OTHER. A letter/numeral within a circle may be placed on/adjacent to the line at entry points to identify a parking position. When all positions are not able to accommodate the design helicopter, each position must be marked to indicate the largest rotor diameter that the position is capable of accommodating. This may be indicated by placing the position letter/number above the number of the design rotor diameter at each entry point to the position. Figure A2-3 illustrates the recommended marking.



LETTER/NUMBER IDENTIFIER
WHEN ALL POSITIONS SAME SIZE

LETTER/NUMBER IDENTIFIER
OVER ROTOR DIAMETER WHEN
ALL POSITIONS NOT SAME SIZE

Figure A2-3. Other markings

APPENDIX 3. AVIATION ORGANIZATIONS

STATE AVIATION OFFICES

ALABAMA
Alabama Department Of Aeronautics
770 Washington Avenue, Suite 544
Montgomery, AL 36130
Telephone 205-242-4972
FAX 205-240-3274

ALASKA
Department of Transportation &
Public Facilities
P.O. Box 196900
Anchorage, AK 99519-6900
Telephone 907-266-1465
FAX 907-243-1512

ARIZONA
Division of Aeronautics
Arizona Department of Transportation
2612 South 46th Street
Phoenix, AZ 85034
Telephone 602-255-7691
FAX 602-255-7037

ARKANSAS
Department of Aeronautics
Regional Airport Terminal Building
No. 1 Airport Drive
Little Rock, AR 72202
Telephone 501-376-6781
FAX 501-378-0820

CALIFORNIA
Division of Aeronautics
California Department of Transportation
1130 K Street, 4th Floor
P.O. Box 942873
Sacramento, CA 94273-0001
Telephone 916-322-9965
FAX 916-327-9093

COLORADO
Division of Aeronautics
Colorado Department of Transportation
6848 South Revere Parkway, Suite 3-101
Englewood, CO 80112-6703
Telephone 303-397-3045
FAX 303-397-3042

CONNECTICUT
Bureau of Aviation and Ports
Connecticut Department of Transportation
24 Wolcott Hill Road
P.O. Drawer A
Wethersfield, CT 06129-0801
Telephone 203-566-3076
FAX 203-566-4904

DELAWARE
Aeronautics Administration
Delaware Transportation Authority
Department of Transportation
P.O. Box 778
Dover, DE 19903
Telephone 302-739-3264
FAX 302-739-5711

FLORIDA
Aviation Office
Florida Department of Transportation
605 Suwannee Street
Mail Stop 46
Tallahassee, FL 32399-0450
Telephone 904-488-8444
FAX 904-487-3403

GEORGIA
Georgia Department of Transportation
Office of Intermodal Programs
276 Memorial Drive, SW
Atlanta, GA 30303-3743
Telephone 404-651-9201
FAX 404-651-5209

HAWAII
Airports Division
Hawaii Department of Transportation
Honolulu International Airport
Honolulu, HI 96819-1898
Telephone 808-836-6542
FAX 808-836-6441

IDAHO
Bureau of Aeronautics
Idaho Department of Transportation
3483 Rickenbacker Street
P.O. Box 7129
Boise, ID 83705
Telephone 208-334-8786
FAX 208-334-8789

ILLINOIS
Division of Aeronautics
Department of Transportation
Capital Airport - One Langhorne Bond Dr.
Springfield, IL 62707-8415
Telephone 217-785-8544
FAX 217-785-4533

INDIANA
Division of Aeronautics
Indiana Department of Transportation
143 West Market Street, Suite 300
Indianapolis, IN 46204
Telephone 317-232-1496
FAX 317-232-1499

IOWA
Office of Aeronautics
Air and Transit Division
Iowa Department of Transportation
International Airport
Des Moines, IA 50321
Telephone 515-287-3315
FAX 515-287-7731

KANSAS
Division of Aviation
Kansas Department of Transportation
Docking State Office Building
915 SW Harrison
Topeka, KS 66612-1568
Telephone 913-296-2553
FAX 913-296-7927

KENTUCKY
Office of Aeronautics
Kentucky Transportation Cabinet
421 Ann Street
Frankfort, KY 40622
Telephone 502-564-4480
FAX 502-564-7953

LOUISIANA
Aviation Division
Department of Transportation & Development
P.O. Box 94245
Baton Rouge, LA 70804-9245
Telephone 504-379-1242
FAX 504-379-1394

MAINE
Air Transportation Division
Maine Department of Transportation
State House Station #16
Augusta, ME 04333
Telephone 207-289-3186
FAX 207-289-2805

MARYLAND
Maryland Aviation Administration
Maryland Department of Transportation
P.O. Box 8766
Baltimore/Washington Intl. Airport
MD 21240
Telephone 410-859-7100
FAX 410-850-4729

MASSACHUSETTS
Massachusetts Aeronautics Commission
10 Park Plaza, Room 6620
Boston, MA 02116-3966
Telephone 617-973-7350
FAX 617-973-7351

MICHIGAN
Bureau of Aeronautics
Department of Transportation
2nd Floor, Terminal Building
Capital City Airport
Lansing, MI 48906
Telephone 517-373-1834
FAX 517-886-0366

MINNESOTA
Aeronautics Office
Minnesota Department of Transportation
Transportation Building, Room 417
395 John Ireland Boulevard
St. Paul, MN 55155
Telephone 612-296-8202
FAX 612-297-5643

MISSISSIPPI
Mississippi Aeronautics Bureau
Department of Economic & Community Development
100 Airport Drive
Jackson, MS 39208
Telephone 601-354-6970
FAX 601-354-6969

MISSOURI
Department of Highways & Transportation
Aviation Section
P.O. Box 270
Jefferson City, MO 65102
Telephone 314-751-2589
FAX 314-751-6555

MONTANA
Aeronautics Division
Department of Transportation
P.O. Box 5178
Helena, MT 59604
Telephone 406-444-2506
FAX 406-444-2519

NEBRASKA
Nebraska Department of Aeronautics
P.O. Box 82088
Lincoln, NB 68501
Telephone 402-471-2371
FAX 402-471-2906

NEVADA
Nevada Department of Transportation
1263 South Stewart Street
Carson City, NV 89712
Telephone 702-687-5440
FAX 702-687-4846

NEW HAMPSHIRE
Division of Aeronautics
New Hampshire Department of Transportation
Municipal Airportú65 Airport Road
Concord, NH 03302-5298
Telephone 603-271-2551
FAX 603-271-1689

NEW JERSEY
Office of Aviation
New Jersey Department of Transportation
1035 Parkway Avenue CN 610
Trenton, NJ 08625
Telephone 609-530-2900
FAX 609-530-5719

NEW MEXICO
Aviation Division
State Highway and Transportation Department
P.O. Box 1149
Santa Fe, NM 87504-1149
Telephone 505-827-0332
FAX 505-827-0431

NEW YORK
Aviation Division
New York State Department of Transportation
1220 Washington Avenue
Albany, NY 12232
Telephone 518-457-2821
FAX 518-457-9779

NORTH CAROLINA
Division of Aviation
North Carolina Department of Transportation
P.O. Box 25201
Raleigh, NC 27611
Telephone 919-840-0112
FAX 919-840-0645

NORTH DAKOTA
North Dakota Aeronautics Commission
2301 University Drive
Box 5020
Bismarck, ND 58502
Telephone 701-224-2748
FAX 701-224-2780

OHIO
Ohio Department of Transportation
Division of Aviation
2829 West Dublin-Granville Road
Columbus, OH 43235
Telephone 614-793-5040
FAX 614 761-9609

OKLAHOMA
Oklahoma Aeronautics Commission
Department of Transportation Building
200 N.E. 21st Street, B-7 1st Floor
Oklahoma City OK 73105
Telephone 405-521-2377
FAX 405-521-2524

OREGON
Division of Aeronautics
Oregon Department of Transportation
3040 - 25th Street, S.E.
Salem, OR 97310
Telephone 503-378-4880
FAX 503-373-1688

PENNSYLVANIA
Bureau of Aviation
Pennsylvania Department of Transportation
208 Airport Drive
Harrisburg International Airport
Middletown, PA 17057
Telephone 717-948-3915
FAX 717-948-3527

PUERTO RICO
Puerto Rico Ports Authority
P.O. Box 362829
San Juan, PR 00936-2829
Telephone 809-723-2260
FAX 809-722-7867

RHODE ISLAND
Rhode Island Department of Transportation
Department of Airports
Theodore Francis Green State Airport
Warwick, RI 02886
Telephone 401-737-4000
FAX 401-732-4953

SOUTH CAROLINA
South Carolina Aeronautics Commission
P.O. Box 280068
Columbia, SC 29228-0068
Telephone 803-822-5400
FAX 803-822-8002

SOUTH DAKOTA
Office of Aeronautics
700 Broadway Avenue East
Pierre, SD 57501-2586
Telephone 605-773-3574
FAX 605-773-3921

TENNESSEE
Office of Aeronautics
Tennessee Department of Transportation
P.O. Box 17326
Nashville, TN 37217
Telephone 615-741-3208
FAX 615-741-4959

TEXAS
Texas Department of Transportation
Division of Aeronautics
P.O. Box 12607
Austin, TX 78711-2607
Telephone 512-476-9262
FAX 512-479-0294

UTAH
Aeronautical Operations Division
Utah Department of Transportation
135 North 2400 West
Salt Lake City, UT 84116
Telephone 801-533-5057
FAX 801-533-6048

VERMONT
Agency of Transportation
133 State Street
Montpelier, VT 05633
Telephone 802-828-2093
FAX 802-828-2829

VIRGINIA
Department of Aviation
4508 S. Laburnum Avenue
Richmond, VA 23231-2422
Telephone 804-786-1364
FAX 804-786-3690

WASHINGTON
Division of Aeronautics
Washington Department of Transportation
8600 Perimeter Road-Boeing Field
Seattle, WA 98108-3885
Telephone 206-764-4131
FAX 206-764-4001

WEST VIRGINIA
Department of Transportation
Building 5, Room A-109
West Virginia State Capital
Charleston, WV 25305
Telephone 304-348-0444
FAX 304-348-4076

WISCONSIN
Bureau of Aeronautics
Division of Transportation Assistance
Wisconsin Department of Transportation
P.O. Box 7914
Madison, WI 53707-7914
Telephone 608-266-3351
FAX 608-267-6748

WYOMING
Wyoming Department of Transportation
5300 Bishop Boulevard
P.O. box 1708
Cheyenne, WY 82002-9019
Telephone 307-777-4480
FAX 307-637-7352

Aviation Organization/Associations

AIRPORT CONSULTANTS COUNCIL
421 King Street, Suite 220
Alexandria, VA 22314
Telephone 703-683-5900
FAX 703-549-4749

AMERICAN HELICOPTER SOCIETY
217 N. Washington St.
Alexandria, VA 22314
Telephone 703-684-6777
FAX 703-739-9279

ASSOCIATION OF AIR MEDICAL SERVICES
35 S. Raymond Avenue, Suite 205
Pasadena, CA 91105
Telephone 818-793-1232
FAX 818-793-1039

HELICOPTER ASSOCIATION INTERNATIONAL
1619 Duke Street
Alexandria, VA 22314-3406
Telephone 703 683-4646
FAX 703-683-4745

HELICOPTER SAFETY ADVISORY CONFERENCE
c/o Exxon USA-Offshore Division
P.O. Box 60626
New Orleans, LA 70160
Telephone 504-561-4314
FAX 504-561-4808

NATIONAL ASSOCIATION OF STATE AVIATION OFFICIALS
Metro Plaza One-Suite 505
8401 Colesville Road
Silver Spring, MD 20910
Telephone 301-588-0587
FAX 301-588-1288

NATIONAL BUSINESS AIRCRAFT ASSOCIATION
1200 18th Street, Northwest, Suite 200
Washington, D.C. 20036
Telephone 202-783-9000
FAX 202-331-8364

NATIONAL EMS PILOTS ASSOCIATION
35 South Raymond Avenue, No. 205
Pasadena, CA 91105
Telephone 818-577-7600
FAX 818-793-1039

FEDERAL AVIATION ADMINISTRATION
AIRPORTS DIVISION OFFICES

ALASKAN REGION
Alaskan Regional Office
AK
Airports Division, AAL-600
222 West 7th Avenue, Box 14
Anchorage, AK 99513
Telephone 907-271-5438
FAX 907-271-2851

NEW ENGLAND REGION
CT, MA, ME, NH, RI, VT
New England Regional Office
Airports Division, ANE-600
12 New England Executive Park
Burlington, MA 01803-5299
Telephone 617-238-7044
FAX 617-238-7608

EASTERN REGION
DC, DE, MD, NJ, NY, PA, VA, WV
Eastern Regional Office
Airports Division, AEA-600
JFK International Airport
Fitzgerald Federal Building
Jamaica, NY 11430
Telephone 718-553-1239
FAX 718-995-9219

SOUTHERN REGION
AL, FL, GA, KY, NC, SC, TN, PR, VI
Southern Regional Office
Airports Division, ASO-600
1701 Columbia Avenue
College Park, Georgia 30337
Telephone 404-305-6700
FAX 404-305-6730

GREAT LAKES REGION
IL, IN, MI, MN, ND, OH, SD, WI
Great Lakes Regional Office
Airports Division, AGL-600
2300 East Devon Avenue
Des Plaines, IL 60018
Telephone 708-294-7272
FAX 708-294-7036

CENTRAL REGION
IA, KS, MO, NE
Central Regional Office
Airports Division, ACE-600
601 East 12th Street
Kansas City, MO 64106
Telephone 816-426-4698
FAX 816-426-3265

SOUTHWEST REGION
AR, LA, NM, OK, TX
Southwest Regional Office
Airports Division, ASW-600
2061 Meacham Boulevard
Fort Worth, Texas 76173-4298
Telephone 817-222-5600
FAX 817-22-5984

NORTHWEST MOUNTAIN REGION
CO, ID, MT, OR, UT, WA, WY
Northwest Regional Office
Airports Division, ANM-600
1601 Lind Avenue SW, Suite 540
Renton, Washington 98055-4056
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FAX 206-227-1600

WESTERN-PACIFIC REGION
AZ, CA, HI, NV, GU
Western-Pacific Regional Office
Airports Division, AWP-600
15000 Aviation Boulevard
Hawthorne, CA 920261
Telephone 310-297-1240
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